Use Attainability Analysis

for

WBID 0937 Walnut Creek

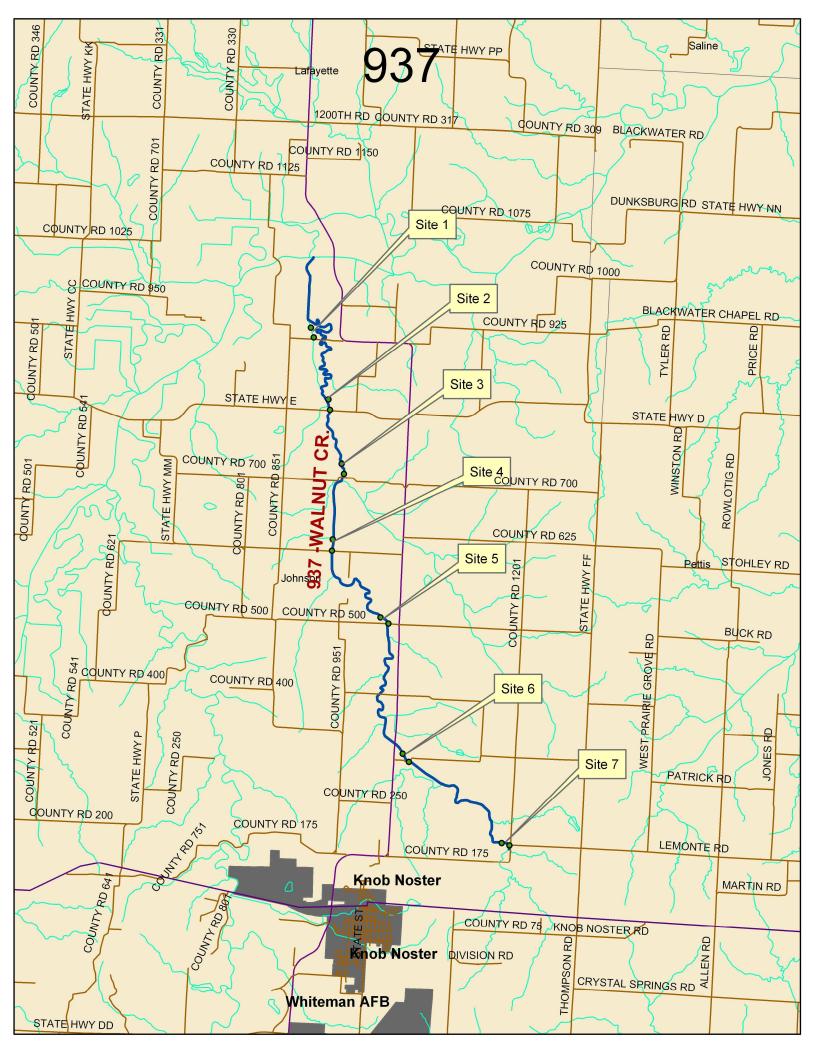
Submitted by SES, Inc.

to Missouri Department of Natural Resources Water Protection Program

Date received: November 14, 2007

Data Sheet A - Water Body Identification

I. Water E	Body Inforn	nation (F	-or water body be	ing surveyed)	
Water Bo	dy Name (fr	om USGS 7.5'	quad): Walnut Ci	reek		
Missouri \	Water Body	Identification (\	WBID) Number:	937		
8 digit HU	IC code:	10290108		County:	Johnson	
Upstream	Legal Des	cription (from Ta	able H):	T46N	R24W	Sec14
Downstre	am Legal D	escription (from	n Table H):	T48N	R24W	Sec33
Number o	of sites eval	uated:	7			
List all site	e numbers,	listed conseque	ently upstream to	downstream	·	
	7, 6, 5, 4,	3, 2, 1				
	•	• •	•	gment with a	ssessment	sites clearly labeled.
Mark any	other items	that may be of	interest.			
			itted discharges to	the water b	ody segmer	nt)
Facility Na	ame(s) and	Permit Number	r(s):			
	Rainbow MO01132	Acres Subdivisi 271	on			
III. UAA S	Survevor (p	lease print legib	olv)			
Name of S		Gilisa Gould		Telephon	e Number:	9133070054
Organizat	tion/Employ	er: SI	ES, Inc.			
Please ve	-	ou have compl	eted all sections	s, checked a	ll applicabl	e boxes, and that the form is
Signed:	gilisa go	uld		Date:	11.02.07	



Data Sheet B-Site Characterization

							
Date & Time:	10.24.07 17:40)	Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa Brown and Gilisa C	Gould		CR 925			
Current Weatl	her Conditions: clear		Facility Nar	ne:	Rainbow Acre	es Subdivision	
Weather cond	litions for the past 10 days:4	1.65 inches	Permit Nun	nber:	MO0113271		
Drought cond	itions?: No drought ☑ ; Pha	ıse I □ ; Phase	ı II □ ; Phas	e III □ ; Pł	nase IV □ ; Ur	nknown 🗆	
Site Location	n•						
	rdinates (Universal Transve	rse Mercator Pr	rojection, In	Meters			
Site 01	Easting (UTM X):	Northing (UTN	М <u>Y):</u>		Horizontal Ac	ccuracy:	Meters
	0450455		4304358				2.4
Site 11	Easting (UTM X):	Northing (UTN	M Y):		Horizontal Ac	curacy:	Meters
	0450306		4304582				6.0
	040000		700700 <u>2</u>				0.0
Photos:	1		<u> </u>		,	•	
Photo ID#	Photo Purpose	Photo ID#:	Photo F	ourpose	Photo ID#:	Photo Pu	rpose
71	downstream, T1	72	upstream, ⁻	Γ1	73	downstream, T	11
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Pu	rpose
74	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	urpose	Photo ID#	Photo Pu	rpose
Uses Observ	ed:						
☐ Swimming	g □ Skin diving	☐ SCUBA di	iving	☐ Tubing	g	☐ Water Skiin	g
☐ Wind surfi	ng □ Kayaking	☐ Boating		□ Wadin	ng	□ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:	<u> </u>						

WBID#	937
Site #	1

Data Sheet B- Site Characterization (Continued)

	Bata Giloot B	Onto Onaraotorizatio	/// (J	luou,		
Surrounding Condition						
☐ City/County parks	☐ playgrounds	☐ MDC conservation		☐ Urban areas		Residential
☐ Campgrounds	☐ State parks	□ National Forests	;	☐ Nature trails		/walkways
□ Boating accesses	☐ Fence	☐ No tresspass sig	<u>jn</u>	☐ Steep Slopes	☐ Other	r:
Comments:						
none						
Evidence of Human l						
☐ Roads	☐ Foot path/prints	□ Dock/platform		☐ Camping Site		
☐ RV/ATV Tracks	☐ Fire pit/ring	□ NPDES Discharg	je <u> </u>	☐ Fishing Tackle		ock watering
comments/other:						
none						
Substrate:						
% Cobble	% Gravel	% Sand	% Silt	% Mud	d/Clay	% Bedrock
	40	20	20		20	
Aquatic Vegatation:						
none						
Water Characteristics	s:					
Odor:	☐ Sewage	☐ Musky	☐ Chem	ical 🗹	1 None	☐ Other:
Color:	☐ Clear	□Green	☑ Gray] Milky	☐ Other:
Bottom Deposit:	☐ Sludge	□ Solids			☑ None	☐ Other:
Surface Deposit:	□ Oil	Scum	☐ Foam		None	☐ Other:

WBID # 937 Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream N	Morphology:	(Record isolated pools	or other features identif	ied during the surve	v that may support re	creational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	(,				
			1		
Comments: (Please re	cord any additional comments	here.)			
none					
Please verify that yo complete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.24.07	
Organization:	SES, Inc.		Position:	field team leader	
- J			_		

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	tygen		
	Waterbo	ody ID:	937			Site #:	1		•							Date:	10 24 03	7		Time:	17:40	
	Estimate	ed Chanr	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)								•	'		
	GPS Lo	cation - 1	Easting (UTM X)	Northin	no (UTM	Y) Hori	izontal Ac	curacy I	Estimate	(EPE / P	DOP / Fo	OM)			Di	issolved	Oxygen:		9.4	(mg/L)	
	01	UTM X	:	0450455	5	1	UTM Y:		430435	8	,	+/-	2.4	(meters)		Di	issolved	Oxygen:			(% sat)	
	11	UTM X	<u>:</u>	0450306	5	. 1	UTM Y:		4304582	2		+/-	6.0	(meters)	•		Specifi	ic Cond:			(uS/cm)	
			Width:				7	(meters)		ength of	-	-		150	(meters)							
	(To dete	ermne Le	ength of F	Reach)					(2	20x avera	ge strear	n width)				Wa	ter Temp	perature:		17.7	(°C)	
	Fiel	ld Staff:	Larissa	Brown		and	Gilisa G	ould						-								
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	13	()4	()5	0	16		07	0	8	0	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.4	0.10	1.0	0.05	0.5	0.30	0.6	0.15	0.7	0.05	0.6	0.15	0.6	0.01	0.7	0.35	0.7	0.40	0.7	0.25	0.2	0.15
2	0.8	0.20	2.0	0.20	1.0	0.55	1.2	0.35	1.4	0.20	1.2	0.20	1.2	0.05	1.4	0.65	1.4	0.70	1.4	0.50	0.4	0.20
3	1.2	0.20	3.0	0.40	1.5	0.65	1.8	0.45	2.1	0.25	1.8	0.15	1.8	0.10	2.1	0.60	2.1	0.70	2.1	0.75	0.6	0.15
4	1.6	0.20	4.0	0.50	2.0	0.65	2.4	0.45	2.8	0.20	2.4	0.15	2.4	0.15	2.8	0.60	2.8	0.65	2.8	0.70	0.8	0.00
5	2.0	0.30	5.0	0.45	2.5	0.55	3.0	0.40	3.5	0.20	3.0	0.15	3.0	0.10	3.5	0.55	3.5	0.50	3.5	0.65	1.0	0.00
(2.4	0.30	6.0	0.45	3.0	0.50	3.6	0.45	4.2	0.20	3.6	0.15	3.6	0.10	4.2	0.55	4.2	0.35	4.2	0.55	1.2	0.01
7	2.8	0.25	7.0	0.50	3.5	0.40	4.2	0.20	4.9	0.05	4.2	0.20	4.2	0.10	4.9	0.40	4.9	0.15	4.9	0.35	1.4	0.01
8	3.2	0.20	8.0	0.40	4.0	0.30	4.8	0.15	5.6	0.01	4.8	0.01	4.8	0.05	5.6	0.20	5.6	0.05	5.6	0.20	1.6	0.01
9	3.6	0.15	9.0	0.20	4.5	0.20	5.4	0.01	6.3	0.01	5.4	0.01	5.4	0.05	6.3	0.05	6.3	0.05	6.3	0.05	1.8	0.05
Right Bank	4.0	0.00	10.0	0.00	5.0	0.00	6.0	0.00	7.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	2.0	0.00
eature Type																						
iffle, run, or poo	ı po	ool	pc	ol	pc	ool	pe	ool	po	ool	po	ool	p	ool	po	ol	pc	ool	po	ol	rif	fle

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
-------------------------------------	--

WBID#	937
Site #	2

Data Sheet B-Site Characterization

Date & Time:	10.25.0	7 10:35		Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa	Brown and Gilisa G	ould		Highway I			
Current Weat	her Cond	ditions: clear		Facility Nar	me:	Rainbow Acre	es Subdivision	
Weather cond	litions fo	r the past 10 days:2	.17 inches	Permit Nun	nber:	MO0113271		
Drought cond	itions?: N	No drought ☑ ; Pha	se I □ ; Phase	Ⅱ 🛭 ; Phas	e III □ ; Pl	nase IV □ ; Ur	nknown 🗆	
Site Location	1.							
		(Universal Transver	se Mercator P	rojection, In	Meters			
Site 01	Easting	(UTM X):	Northing (UTI	И Y):		Horizontal Ac	curacy:	Meters
		0450818		4302696				5.4
Site 11	Easting	(UTM X):	Northing (UTI	И Y):		Horizontal Ac	curacy:	Meters
		0450779		4302936			-	7.3
	<u> </u>	0400113		+302330			,	
Photos:			ı	1		1	T	
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpos	se .
75		downstream, T1	76	upstream,	T1	77	downstream, T11	
Photo ID#	P	hoto Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpos	se
78		upstream, T11						
Photo ID#	P	hoto Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpos	se
Uses Observ	ed:							
☐ Swimming	l	☐ Skin diving	☐ SCUBA d	iving	☐ Tubin	g	☐ Water Skiing	
☐ Wind surfi	ng	☐ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting	
☐ Hunting		☐ Trapping	☐ Fishing		✓ None	of the above	☐ Other:	
Describe:					•			

WBID#	937
Site #	2

Data Sheet B- Site Characterization (Continued)

Surrounding Conditi	ons:					
☐ City/County parks	☐ playgrounds	☐ MDC conserva	ation lands	☐ Urban area	s □ Ru	ral Residential
☐ Campgrounds	☐ State parks	□ National Fores	sts	□ Nature trails	☐ Sta	nirs/walkways
☐ Boating accesses	☑ Fence	☐ No tresspass :	sign	☐ Steep Slope	s 🗆 Ot	her:
Comments:						
none						
F 11						
Evidence of Human I					1	•
☐ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sit		pe swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discha	arge	☐ Fishing Tack	kle ⊔ Liv	estock watering
comments/other:						
none						
none						
none						
none						
none Substrate:						
Substrate:	% Gravel	% Sand	% Silt	% M	ud/Clay	% Bedrock
	% Gravel 40	% Sand 20	% Silt 20	% M	ud/Clay 20	% Bedrock
Substrate:				% M	•	% Bedrock
Substrate:				% M	•	% Bedrock
Substrate: % Cobble				% M	•	% Bedrock
Substrate: % Cobble				% M	•	% Bedrock
Substrate: % Cobble Aquatic Vegatation:				% M	•	% Bedrock
Substrate: % Cobble Aquatic Vegatation:				% M	•	% Bedrock
Substrate: % Cobble Aquatic Vegatation: none	40			% M	•	% Bedrock
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic	40 s:	20	20		20	
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic: Odor:	40 s: □ Sewage	20	20 □ Chem		20 ZO	□ Other:
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic: Odor: Color:	s: Sewage Clear	20 ☐ Musky ☐ Green	20 ☐ Chem	ical	20 ✓ None □ Milky	□ Other:
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic: Odor:	40 s: □ Sewage	20	20 ☐ Chem	ical sediments	20 ZO	□ Other:

WBID # 937 Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Mo	rphology:	(Record isolated pools	or other features	identified during	the survey that may	support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)				
	access location (III)								
Commonto (D)									
Comments: (Please re	cord any additional comments l	nere.)							
none									
Please verify that yo complete.	Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.								
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.25.07					
Organization:	SES, Inc.		Position:	field team leader					

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	tygen		
	Waterbo	ody ID:	937			Site #:	2									Date:	10.25.07	7		Time:	10:35	
	Estimat	ed Chanr	nel Incisio	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					Di	issolved	Oxygen:		10.8	(mg/L)	
						rthing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)												,				
		UTM X UTM X		0450818			UTM Y: UTM Y:		430269		•	+/-	7.3	(meters)		Di	issolved	Oxygen:			(% sat)	
						•					•						Specifi	ic Cond:			(µS/cm)	
			Width: ength of F				8	(meters)		ength of 20x avera	•	-		160	(meters)	Wa	ıter Temr	erature.		15.5	(°C)	
									(-		ge sarear					,,,		, , , , , , , , , , , , , , , , , , , ,		10.0	(0)	
	Fiel	ld Staff:	Larissa	a Brown		and	Gilisa G	ould						-								
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	3	()4	()5	0	6		07	08	8	0	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.25	0.7	0.15	0.7	0.20	0.1	0.10	0.2	0.30	0.1	0.05	0.4	0.01	0.4	0.01	0.4	0.01	0.5	0.01	0.3	0.15
2	1.6	0.65	1.4	0.35	1.4	0.25	0.2	0.15	0.4	0.25	0.2	0.00	0.8	0.05	0.8	0.05	0.8	0.05	1.0	0.10	0.6	0.25
3	2.4	0.70		0.60	2.1			0.20	0.6					0.15	1.2		1.2	0.10			0.9	
4	3.2			0.60				0.20	0.8				1.6		1.6	0.10					1.2	
5	4.0	0.50	3.5	0.50	3.5	0.40	0.5	0.15	1.0	0.20	0.5	0.05	2.0	0.25	2.0	0.05	2.0	0.20	2.5	0.40	1.5	0.15
6	4.8	0.45	4.2	0.50	4.2	0.55	0.6	0.10	1.2	0.15	0.6	0.05	2.4	0.15	2.4	0.00	2.4	0.20	3.0	0.45	1.8	0.10
7	5.6	0.45	4.9	0.55	4.9	0.70	0.7	0.05	1.4	0.15	0.7	0.05	2.8	0.35	2.8	0.05	2.8	0.20	3.5	0.30	2.1	0.00
8	6.4	0.50	5.6	0.60	5.6	0.50	0.8	0.05	1.6	0.10	0.8	0.01	3.2	0.05	3.2	0.01	3.2	0.15	4.0	0.15	2.4	0.10
9	7.2	0.20	6.3	0.30	6.3	0.15	0.9	0.01	1.8	0.05	0.9	0.01	3.6	0.05	3.6	0.01	3.6	0.05	4.5	0.05	2.7	0.05
ight Bank	8.0	0.00	7.0	0.00	7.0	0.00	1.0	0.00	2.0	0.00	1.0	0.00	4.0	0.00	4.0	0.00	4.0	0.00	5.0	0.00	3.0	0.00
eature Type																						
ffle, run, or poo	ı po	ool	pc	ol	pc	ool	ri	ffle	po	ool	rif	fle	р	ool	po	ol	pc	ool	pc	ol	po	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
-------------------------------------	--

Data Sheet B-Site Characterization

Date & Time:	10.25.07 11:20		Site Location	on Descrip	tion (e.g. road	crossing):		
Personnel:	Larissa Brown and Gilisa G	ould	CR 700					
Current Weatl	her Conditions: clear		Facility Nar	ne:	Rainbow Acre	ea Subdivision		
Weather cond	ditions for the past 10 days:2	17 inches	Permit Num	nber:	MO0113271			
Drought cond	itions?: No drought ☑ ; Phas	se I □ ; Phase	· II □ ; Phas	e III □ ; Pł	hase IV □ ; Ur	nknown 🗆		
_								
Site Location	Site Legation							
	rdinates (Universal Transver	se Mercator Pr	rojection, In	Meters				
Site 01	Easting (UTM X):	Northing (UTN	М <u>Y):</u>		Horizontal Ac	ccuracy: Meter		
	0451137		4301228			3.3		
Site 11	Easting (UTM X):	Northing (UTN			Horizontal Ac	ccuracy: Meter		
	0451081		4301455			7.6		
7.0								
Photos:	1		.		 	T		
Photo ID#	Photo Purpose	Photo ID#:	Photo F	ourpose	Photo ID#:	Photo Purpose		
79	downstream, T1	80	upstream,	Γ1	81	upstream, T11		
Photo ID#	Photo Purpose	Photo ID#	Photo P	urpose	Photo ID#	Photo Purpose		
82	downstream, T11							
Photo ID#	Photo Purpose	Photo ID#	Photo F	urpose	Photo ID#	Photo Purpose		
Uses Observ	ed:							
☐ Swimming	g □ Skin diving	☐ SCUBA di	iving	☐ Tubing	9	☐ Water Skiing		
☐ Wind surfi	ing □ Kayaking	☐ Boating		□ Wadin	ng	□ Rafting		
☐ Hunting	☐ Trapping	☐ Fishing		☑ None (of the above	☐ Other:		
Describe:		-						

WBID#	937
Site #	3

Data Sheet B- Site Characterization (Continued)

Surrounding Conditi	ons:			
☐ City/County parks	☐ playgrounds	☐ MDC conservation lar	nds 🛘 Urban areas	☐ Rural Residential
□ Campgrounds	☐ State parks	□ National Forests	☐ Nature trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	☐ No tresspass sign	☐ Steep Slopes	☐ Other:
Comments:				
none				
Evidence of Human	l leo:			
□ Roads	☐ Foot path/prints	☐ Dock/platform	☐ Camping Sites	□ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	
comments/other:		L 141 DEC Discharge	□ Floring Facility	Livestook watering
none				
110110				
one				
Substrate:				
	% Gravel	% Sand % S		•
Substrate:	% Gravel 10			/Clay % Bedrock 0
Substrate: % Cobble				•
Substrate:				•
Substrate: % Cobble Aquatic Vegatation:				•
Substrate: % Cobble				•
Substrate: % Cobble Aquatic Vegatation:				•
Substrate: % Cobble Aquatic Vegatation:				•
Substrate: % Cobble Aquatic Vegatation:	10			•
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic	10 :s:	70 1	0 1	•
Substrate: % Cobble Aquatic Vegatation: none	10	70 1	0 1 hemical ☑	0
Substrate: % Cobble Aquatic Vegatation: none Water Characteristic Odor:	10 ss: □ Sewage	70 1 ☐ Musky ☐ C ☐ Green ☐ G	hemical ☑ ray □ ne sediments ☑	None □ Other:

WBID # 937 Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support re	recreational uses)
---	--------------------

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	(,				
_					
Comments: (Please re	cord any additional comments	here.)			
none					
complete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	torm is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.25.07	
Organization:	SES, Inc.		Position:	field team leader	
=			_		

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	ygen		
																Date:	10.25.07			Time:	11:20	
	Estimate	ed Chann	el Incisio	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					Di	ssolved (Oxygen:		13.0	(mg/L)	
							Y), Hor	izontal Ac	curacy I	Estimate	(EPE / P	DOP / F	OM)								, ,	
	01	UTM X	:	0451137	7					8	<u>.</u>	+/-	3.3	(meters)		Di	ssolved (Oxygen:			(% sat)	
	11	UTM X		0451081	1	. 1	UTM Y:		430145	5	-	+/-	7.6	(meters)								
	Average	Stream	Width:				7	(meters)	L	ength of	Survey S	Segment:		150	(meters)		Specifi	c Cond:			(μS/cm)	
	(To dete	rmne Le	ngth of R	Reach)					(2	20x avera	ige strear	n width)				Wa	ter Temp	erature:		17	(°C)	
	Fiel	d Staff:	Larissa	Brown		and	Gilisa G	ould						<u>-</u>								
										Tra	nsect C	ross-Se	ction									
	0	1	0:	2	0	13		04	C)5	0)6		07	08	3	09	9	1	0	11	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)						
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.10	0.8	0.35	0.1	0.20	0.1	0.05	0.8	0.01	0.6	0.05	0.8	0.05	0.2	0.01	0.7	0.05	0.7	0.10	0.9	0.20
2	1.4	0.40	1.6	0.50	0.2	0.30	0.2	0.10	1.6	0.20	1.2	0.10	1.6	0.30	0.4	0.01	1.4	0.05	1.4	0.25	1.8	0.25
3	2.1	0.60	2.4	0.65	0.3	0.20	0.3	0.05	2.4	0.20	1.8	0.30	2.4	0.45	0.6	0.00	2.1	0.00	2.1	0.20	2.7	0.40
4	2.8	1.00	3.2	0.70	0.4	0.10	0.4	0.20	3.2	0.20	2.4	0.40	3.2	0.40	0.8	0.00	2.8	0.00	2.8	0.00	3.6	0.40
5	3.5	1.00	4.0	0.70	0.5	0.05	0.5	0.20	4.0	0.20	3.0	0.45	4.0	0.60	1.0	0.00	3.5	0.00	3.5	0.15	4.5	0.35
6	4.2	1.00	4.8	0.70	0.6	0.05	0.6	0.10	4.8	0.25	3.6	0.40	4.8	0.50	1.2	0.05	4.2	0.01	4.2	0.25	5.4	0.35
7	4.9	1.00	5.6	0.50	0.7	0.01	0.7	0.05	5.6	0.20	4.2	0.25	5.6	0.50	1.4	0.05	4.9	0.05	4.9	0.20	6.3	0.40
8	5.6	1.00	6.4	0.20	0.8	0.01	0.8	0.05	6.4	0.20	4.8	0.10	6.4	0.30	1.6	0.10	5.6	0.05	5.6	0.10	7.2	0.30
9	6.3	1.00	7.2	0.05	0.9	0.01	0.9	0.01	7.2	0.10	5.4	0.10	7.2	0.10	1.8	0.05	6.3	0.05	6.3	0.05	8.1	0.10
Right Bank	7.0	0.00	8.0	0.00	1.0	0.00	1.0	0.00	8.0	0.00	6.0	0.00	8.0	0.00	2.0	0.00	7.0	0.00	7.0	0.00	9.0	0.00
Feature Type		-1		-1		1		1		1		1		1		.	0	a .		-1		-1
riffle, run, or pool	po	100	po	100	pc	ool	p	ool	po	ool	pc	ool	p	ool	poo)[rif	ie	po	01	po	01

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
-------------------------------------	--

WBID#	937
Site #	4

Data Sheet B-Site Characterization

Date & Time:	10.25.0	7 12:00		Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel: Larissa Brown and Gilisa Gould					CR 600			
Current Weat	her Cond	ditions: clear		Facility Na	me:	Rainbow Acre	es Subdivision	
Weather cond	litions fo	r the past 10 days:2	.17 inches	Permit Nur	nber:	MO0113271		
Drought cond	itions?: I	No drought ☑ ; Pha	se I □ ; Phase	· II □ ; Phas	e III □ ; PI	hase IV □ ; Ur	nknown 🗆	
Site Location	١.							
		(Universal Transver	se Mercator P	rojection, In	Meters			
Site 01	Easting	ı (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy:	Meters
		0450862		4299454				3.3
Site 11	Easting	ı (UTM X):	Northing (UTI	M Y):		Horizontal Ac	curacy:	Meters
	<u> </u>	0450877		4299727			j	7.3
		0430077	<u> </u>	4233121				7.5
Photos:				_		1	1	
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo P	'urpose
83		downstream, T1	84	upstream,	T1	85	downstream,	T11
Photo ID#	F	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo P	'urpose
86		upstream, T11						
Photo ID#	F	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo P	'urpose
Uses Observ	ed:							
☐ Swimming]	☐ Skin diving	☐ SCUBA d	iving	☐ Tubin	g	☐ Water Ski	ing
☐ Wind surfi	ng	☐ Kayaking	☐ Boating		□ Wadir	ng	□ Rafting	
☐ Hunting		☐ Trapping	☐ Fishing			of the above	☐ Other:	
Describe:			1		1		1	

WBID#	937
Site #	4

Data Sheet B- Site Characterization (Continued)

Surrounding Condition	ons:					
☐ City/County parks	□ playgrounds	☐ MDC conservation	n lands	☐ Urban areas	☐ Rura	l Residential
☐ Campgrounds	☐ State parks	□ National Forests		☐ Nature trails	☐ Stairs	s/walkways
☐ Boating accesses	☐ Fence	✓ No tresspass sign	n	☐ Steep Slopes	☐ Othe	er:
Comments:						
none						
Evidence of Human I	Jse:					
□ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sites		swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	е	☐ Fishing Tackle	e ☐ Lives	tock watering
comments/other:						
none						
Substrate:						
Substrate: % Cobble	% Gravel	% Sand	% Silt	% Muc	d/Clay	% Bedrock
	% Gravel 10	% Sand 30	% Silt		d/Clay 50	% Bedrock
% Cobble			% Silt		•	% Bedrock
% Cobble 10			% Silt		•	% Bedrock
% Cobble 10			% Silt		•	% Bedrock
% Cobble 10 Aquatic Vegatation:			% Silt		•	% Bedrock
% Cobble 10 Aquatic Vegatation:			% Silt		•	% Bedrock
% Cobble 10 Aquatic Vegatation:	10	30		Ę	•	% Bedrock
% Cobble 10 Aquatic Vegatation: none Water Characteristic: Odor:	10 s: □ Sewage	30 □ Musky	□ Chem	ical ∑	I None	□ Other:
% Cobble 10 Aquatic Vegatation: none Water Characteristic Odor: Color:	s: Sewage Clear	30 ☐ Musky ☐ Green	□ Chem	ical ☑	I None	□ Other:
% Cobble 10 Aquatic Vegatation: none Water Characteristic: Odor:	10 s: □ Sewage	□ Musky □ Green □ Solids	□ Chem	ical ☑ ediments ☑	I None	□ Other:

WBID # 937 Site # 4

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	,				
			1		
Comments: (Please re	cord any additional comments	here.)			
	none				
Please verify that yo complete.	ou have completed all s	ections, check	ed all applicable	boxes, and that the f	form is
Surveyor's Signature:	gilisa Gould		_Date of Survey:	10.25.07	
Organization:	SES, Inc.		Position:	field team leader	

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	xygen		
			937			Site #:										Date:	10.25.07	7		Time:	12:00	
			nel Incisi					een low b								Di	issolved	Oxygen:		6.2	(mg/L)	
	01	UTM X	<u>: </u>	0450862	2	1	UTM Y:		429945	4		+/-	3.3	(meters)		Di	issolved	Oxygen:			(% sat)	
		UTM X		0450877	/	-		(, ,)			•	+/-	7.3	(meters)			Specif	ic Cond:			(µS/cm)	
	_	e Stream ermne Le	width: ength of I	Reach)			7	(meters)		ength of 20x avera	•	-		150	(meters)	Wa	ıter Temp	perature:		23.8	(°C)	
	Fiel	ld Staff:	Larissa	a Brown		and	Gilisa G	ould						-								
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	13)4	()5	0	6		07	0	8	0	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.3	0.10	0.2	0.15	0.2	0.01	0.3	0.05	0.2	0.01	0.2	0.05	0.1	0.01	0.2	0.01	0.2	0.01	0.1	0.05	0.2	0.10
2	0.6	0.25	0.4	0.35	0.4	0.01	0.6	0.05	0.4	0.01	0.4	0.05	0.2	0.05	0.4	0.15	0.4	0.05	0.2	0.10	0.4	0.15
3	0.9	0.55	0.6	0.25	0.6	0.01	0.9	0.15	0.6	0.00	0.6	0.10	0.3	0.05	0.6	0.10	0.6	0.10	0.3	0.10	0.6	0.10
4	1.2	0.65	0.8	0.30	0.8	0.00	1.2	0.15	0.8	0.01	0.8	0.15	0.4	0.10	0.8	0.10	0.8	0.10	0.4	0.10	0.8	0.05
5	1.5	0.50	1.0	0.30	1.0	0.01	1.5	0.15	1.0	0.01	1.0	0.15	0.5	0.10	1.0	0.10	1.0	0.10	0.5	0.10	1.0	0.01
6	1.8	0.40	1.2	0.30	1.2	0.05	1.8	0.10	1.2	0.05	1.2	0.10	0.6	0.10	1.2	0.10	1.2	0.10	0.6	0.10	1.2	0.00
7	2.1	0.25	1.4	0.55	1.4	0.05	2.1	0.15	1.4	0.10	1.4	0.10	0.7	0.05	1.4	0.05	1.4	0.05	0.7	0.10	1.4	0.05
8	2.4	0.10	1.6	0.50	1.6	0.05	2.4	0.15	1.6	0.10	1.6	0.05	0.8	0.01	1.6	0.05	1.6	0.05	0.8	0.10	1.6	0.10
9	2.7	0.10	1.8	0.20	1.8	0.05	2.7	0.15	1.8	0.10	1.8	0.05	0.9	0.01	1.8	0.05	1.8	0.05	0.9	0.05	1.8	0.05
ight Bank	3.0	0.00	2.0	0.00	2.0	0.00	3.0	0.00	2.0	0.00	2.0	0.00	1.0	0.00	2.0	0.00	2.0	0.00	1.0	0.00	2.0	0.00
eature Type ffle, run, or pool	рс	ool	рс	ool	rif	fle	р	ool	ро	ool	рс	ool	р	ool	ро	ol	рс	ool	рс	ool	ро	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID#	937
Site #	5

Data Sheet B-Site Characterization

Date & Time:	10.25.07 12:45	j	Site Location Description (e.g. road crossing):				
Personnel:	Larissa Brown and Gilisa G	ould		CR 500			
Current Weatl	her Conditions: clear		Facility Nar	acility Name: Rainbow Acres Subdivision			
Weather cond	litions for the past 10 days:2	2.17 inches	Permit Nun	nber:	MO011327		
Drought cond	itions?: No drought ☑ ; Pha	se I □ ; Phase	· II □ ; Phas	e III □ ; Pl	nase IV □ ; Ur	nknown 🗆	
_							
Site Location	. .						
	rdinates (Universal Transver	rse Mercator Pr	rojection, In	Meters			
Site 01	Easting (UTM X):	Northing (UTN	М <u>Y):</u>		Horizontal Ac	curacy:	Meters
	0452158		4297781				3.6
Site 11	Easting (UTM X):	Northing (UTN	M Y):		Horizontal Ac	curacy:	Meters
	0451972	†	4297929			<u>*</u>	5.7
	0431312	<u> </u>	4231323				5.1
Photos:	,	<u>, </u>					
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purp	ose
87	downstream, T1	88	upstream,	T1	89	downstream, T11	
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purp	ose
90	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
Uses Observ	ed:						
☐ Swimming	g □ Skin diving	□ SCUBA di	iving	☐ Tubin	g	☐ Water Skiing	
☐ Wind surfi	ing □ Kayaking	☐ Boating		□ Wadir	ng	□ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:		<u>. </u>		I.		ı	

WBID#	937
Site#	5

Data Sheet B- Site Characterization (Continued)

Surrounding Conditi	ions:					
☐ City/County parks	□ playgrounds	☐ MDC conservation	on lands	☐ Urban areas	☑ Rural	Residential
☐ Campgrounds	☐ State parks	□ National Forests		☐ Nature trails	☐ Stairs	/walkways
☐ Boating accesses	☐ Fence	☐ No tresspass sig	n	☐ Steep Slopes	☐ Othe	
Comments: none						
Evidence of Human					1	<u>.</u>
☐ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sites		
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	<u>e</u>	☐ Fishing Tackle	; ∐ Livesi	tock watering
comments/other:						
none						
Substrate: % Cobble	% Gravel	% Sand	% Silt	% Mud	1/Clav	% Bedrock
10	10	20	, o =		60	70 202
Aquatic Vegatation:						
Water Characteristic					***	7 Oth and
Odor:	☐ Sewage	· · ·	☐ Chem		None	☐ Other:
Color:	☑ Clear		☐ Gray		Milky None	☐ Other:
Bottom Deposit:	☐ Sludge ☐ Oil	☐ Solids ☐ Scum	☐ Fine s		None None	☐ Other:
Surface Deposit:		□ Scuiii	⊔ г∪апп		INOILE	

WBID # 937 Site # 5

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreating	ational uses)
---	---------------

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Comments: (Please re	cord any additional comments	here.)			
one					
Please verify that yo	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
urveyor's Signature:	gilisa gould		_Date of Survey:	10.25.07	

Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	xygen		
		ody ID:														Date:	10.25.07	7		Time:	12:45	
		ed Chann						een low b								Di	issolved	Oxygen:		12.1	(mg/L)	
	01	UTM X	<u>: </u>	0452158	3	1	UTM Y:		429778	1		+/-	3.6	(meters)		Dissolved Oxygen: (% sat)						
		UTM X		0451979)	•		(, ,)			•	+/-	5.7	(meters)			Specifi	ic Cond:			(µS/cm)	
	_	e Stream ermne Le		Reach)			7	(meters)		ength of 20x avera	•	-		150	(meters)	Wa	iter Temp	erature:		16.9	(°C)	
	Fiel	ld Staff:	Lariss	a Brown		and	Gilisa G	ould														
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	13		04	()5	0	16	(07	0	8	0	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.01	0.6	0.05	0.6	0.05	0.7	0.01	0.5	0.01	0.7	0.05	0.7	0.01	0.8	0.05	0.1	0.01	0.7	0.40	0.5	0.10
2	1.0	0.10	1.2	0.05	1.2	0.15	1.4	0.00	1.0	0.05	1.4	0.05	1.4	0.05	1.6	0.01	0.2	0.05	1.4	0.80	1.0	0.15
3	1.5	0.15	1.8	0.05	1.8	0.15	2.1	0.00	1.5	0.10	2.1	0.00	2.1	0.05	2.4	0.00	0.3	0.01	2.1	1.00	1.5	0.20
4	2.0	0.15	2.4	0.05	2.4	0.05	2.8	0.00	2.0	0.10	2.8	0.00	2.8	0.05	3.2	0.00	0.4	0.05	2.8	1.00	2.0	0.20
5	2.5	0.10	3.0	0.10	3.0	0.10	3.5	0.01	2.5	0.05	3.5	0.00	3.5	0.05	4.0	0.01	0.5	0.01	3.5	1.00	2.5	0.30
6	3.0	0.10	3.6	0.10	3.6	0.10	4.2	0.01	3.0	0.10	4.2	0.01	4.2	0.10	4.8	0.01	0.6	0.00	4.2	1.00	3.0	0.25
7	3.5	0.05	4.2	0.15	4.2	0.10	4.9	0.05	3.5	0.10	4.9	0.05	4.9	0.15	5.6	0.05	0.7	0.00	4.9	0.85	3.5	0.35
8	4.0	0.10	4.8	0.05	4.8	0.20	5.6	0.05	4.0	0.10	5.6	0.05	5.6	0.25	6.4	0.05	0.8	0.01	5.6	0.50	4.0	0.20
9	4.5	0.05	5.4	0.01	5.4	0.10	6.3	0.05	4.5	0.05	6.3	0.05	6.3	0.15	7.2	0.05	0.9	0.01	6.3	0.05	4.5	0.05
ight Bank	5.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	5.0	0.00	7.0	0.00	7.0	0.00	8.0	0.00	1.0	0.00	7.0	0.00	5.0	0.00
eature Type	рс	ool	рс	ool	ро	ool	ri	ffle	ро	ool	рс	ool	р	ool	ро	ol	rif	fle	рс	ool	ро	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
-------------------------------------	--

WBID#	937
Site #	6

Data Sheet B-Site Characterization

Date & Time:	10.25.0	7 13:45		Site Location	on Descrip	tion (e.g. road	crossing):			
Personnel:	Larissa	Brown and Gilisa G	Gould		CR 310					
Current Weatl	her Cond	ditions: clear		Facility Nar	me:	Rainbow Acre	es Subdivision			
Weather cond	litions fo	r the past 10 days:2	.17 inches	Permit Nun	Permit Number: MO0113271					
Drought cond	itions?: N	No drought ☑ ; Pha	se I □ ; Phase	Ⅱ 🛭 ; Phas	e III □ ; PI	hase IV □ ; Ur	nknown 🗆			
Site Location										
		(Universal Transver	se Mercator P	rojection, In	Meters					
Site 01	Easting	(UTM X):	Northing (UTI	И Y):		Horizontal Accuracy: M				
		0452630		4294601		5.4				
Site 11	Easting	(UTM X):	Northing (UTI	M Y):		Horizontal Accuracy: Mete				
		0452985	, , , , , , , , , , , , , , , , , , ,	4294788		4.5				
		0432903		4234700			4.0			
Photos:										
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose			
91		downstream, T1	92	upstream,	T1	93	downstream, T11			
Photo ID#	Р	hoto Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose			
94		upstream, T11								
Photo ID#	P	hoto Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose			
Uses Observ	ed:									
☐ Swimming	1	☐ Skin diving	☐ SCUBA d	iving	☐ Tubin	g	☐ Water Skiing			
☐ Wind surfi	ng	☐ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting			
☐ Hunting		☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:			
Describe:										

WBID#	937
Site #	6

Data Sheet B- Site Characterization (Continued)

Surrounding Conditi	ons:				
☐ City/County parks	□ playgrounds	☐ MDC conservation	on lands	☐ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	□ National Forests		☐ Nature trails	☐ Stairs/walkways
☐ Boating accesses	☑ Fence	☐ No tresspass sig	n	☐ Steep Slopes	☐ Other:
Comments:					
fence crosses stream					
Calabas of Human i	llaa.				
Evidence of Human I		E D I / Jaffansa			To be a section of
☐ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sites	☐ Rope swings
□ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharg	е	☐ Fishing Tackle	☐ Livestock watering
comments/other:					
none					
Substrate:					
% Cobble	% Gravel	% Sand	% Silt	% Mud/	Clay % Bedrock
	20	50		30	-
Aquatic Vegatation:					
none					
Matar Obaractoriotic					
Water Characteristic		□ Muslar	□ Cham	:! 🗖 [NI - : D Oth a m
Odor:	☐ Sewage	□ Musky	☐ Chem		None
Color:	Clear	☑Green	☐ Gray		Milky
Bottom Deposit:	☐ Sludge ☐ Oil	☐ Solids ☐ Scum	☐ Fine s		None ☐ Other: None ☐ Other:
Surface Deposit:	□ OII	□ Scuiii	□ roam		ione 🔛 Otilei.

WBID # 937 Site # 6

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)		
	,						
Comments: (Please red	cord any additional comments	here.)					
none							
Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.							
	ou nave completed all s	ections, check		ŕ			
complete.	gilisa gould		Date of Survey:				

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	xygen		
	Waterbo	ody ID:	937		•	Site #:	6									Date:	10.25.0	17		Time:	13:45	
	Estimate	ed Chanr	nel Incisi	on:	2.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)							Oxygen:				
						-		izontal Ac	-		(EPE / P	DOP / FO	OM)									
		UTM X UTM X		0452630			UTM Y:		429460	1 R	•	+/-	5.4 4.5	(meters)	•	Di	issolved	Oxygen:			(% sat)	
											•				•		Specifi	ic Cond:			(µS/cm)	
			Width: ength of F				8	(meters)		ength of 20x avera	-	_		160	(meters)	Water Temperature: 11.3 (°C)						
	E: a1	d Ctaff				Louiss	. D	and Gilis	. Cauld								-					
	Fiel	a Stair:				Lariss	sa Brown	and Gins	a Gould					-								
			ı				ı			Tra	nsect C	ross-Se	ction		1							
	0	1	0	2	0)3	()4)5	0	6	(07	0	8		9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.10	0.8	0.01	0.3	0.01	0.3	0.05	0.4	0.01	0.4	0.05	0.5	0.05	0.8	0.05	0.5	0.01	0.4	0.15	0.9	0.01
2	1.6	0.15	1.6	0.01	0.6	0.01	0.6	0.15	0.8	0.05	0.8	0.05	1.0	0.15	1.6	0.05	1.0	0.15	0.8	0.30	1.8	0.00
3	2.4	0.25	2.4	0.05	0.9	0.01	0.9	0.20	1.2	0.01	1.2	0.05	1.5	0.50	2.4	0.05	1.5	0.20	1.2	0.30	2.7	0.00
4	3.2	0.25	3.2	0.05	1.2	0.01	1.2	0.15	1.6	0.01	1.6	0.05	2.0	0.15	3.2	0.10	2.0	0.25	1.6	0.25	3.6	0.00
5	4.0	0.25	4.0	0.05	1.5	0.01	1.5	0.30	2.0	0.00	2.0	0.10	2.5	0.20	4.0	0.15	2.5	0.35	2.0	0.25	4.5	0.00
6	4.8	0.25	4.8	0.05	1.8	0.05	1.8	0.25	2.4	0.00	2.4	0.05	3.0	0.15	4.8	0.15	3.0	0.30	2.4	0.20	5.4	0.00
7	5.6	0.30	5.6	0.15	2.1	0.01	2.1	0.15	2.8	0.01	2.8	0.05	3.5	0.15	5.6	0.15	3.5	0.15	2.8	0.15	6.3	0.00
8	6.4	0.15	6.4	0.15	2.4	0.01	2.4	0.10	3.2	0.05	3.2	0.01	4.0	0.20	6.4	0.15	4.0	0.15	3.2	0.10	7.2	0.01
9	7.2	0.05	7.2	0.01	2.7	0.01	2.7	0.05	3.6	0.01	3.6	0.01	4.5	0.10	7.2	0.05	4.5	0.10	3.6	0.05	8.1	0.01
ight Bank	8.0	0.00	8.0	0.00	3.0	0.00	3.0	0.00	4.0	0.00	4.0	0.00	5.0	0.00	8.0	0.00	5.0	0.00	4.0	0.00	9.0	0.00
eature Type ffle, run, or pool	nc	ool	nc	ool	rif	fle	n	ool	rit	fle	no	ool	n	ool	ро	ol	nc	ool	рс	ool	рс	ol
, run, or poor	ρC	,	PC		111		P	U U I	111		P			U U I	ρυ	V-	PC	,	ρc		ρc	~ I

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as ≥ 1)

All measurements to be taken to the nearest 0.01 meter.

Signed. gilisa godid Date. 11.02.07	Signed:	gilisa gould	Date:	11.02.07
-------------------------------------	---------	--------------	-------	----------

WBID#	937
Site #	7

Data Sheet B-Site Characterization

Date & Time:	10.25.07 14:20	·	Site Location	on Descrip	tion (e.g. road	crossing):			
Personnel:	Larissa Brown and Gilisa G	Gould		LeMonte I	Rd.				
Current Weat	her Conditions: clear		Facility Nar	ne:	Rainbow Acre	es Subdivision			
Weather cond	ditions for the past 10 days:2	2.17 inches	Permit Num	nber:	MO0113271				
Drought cond	itions?: No drought ☑ ; Pha	se I □ ; Phase	· II □ ; Phas	e III □ ; Pł	hase IV □ ; Ur	nknown 🗆			
		·				_			
Site Location	1'								
	rdinates (Universal Transver	rse Mercator Pr	rojection, In	Meters					
Site 01	Easting (UTM X):	Northing (UTN	М <u>Y):</u>		Horizontal Ac	ccuracy: Meters			
	0454936		4292689		6.7				
Site 11	Easting (UTM X):	Northing (UTN	M Y):		Horizontal Ac	ccuracy: Meters			
	0454754		4292738		5.7				
	1 0404704		4232130						
Photos:									
Photo ID#	Photo Purpose	Photo ID#:	Photo P	urpose	Photo ID#:	Photo Purpose			
95	downstream, T1	96	upstream,	Γ1	97	downstream, T11			
Photo ID#	Photo Purpose	Photo ID#	Photo F	urpose	Photo ID#	Photo Purpose			
98	upstream, T11								
Photo ID#	Photo Purpose	Photo ID#	Photo F	urpose	Photo ID#	Photo Purpose			
Uses Observ	red:								
☐ Swimming	g □ Skin diving	☐ SCUBA di	iving	☐ Tubing	g	□ Water Skiing			
☐ Wind surfi	ing ☐ Kayaking	☐ Boating		□ Wadin	<u>-</u> ng	☐ Rafting			
☐ Hunting	☐ Trapping	☐ Fishing			of the above	☐ Other:			
Describe:	<u>1— · · · · · · · · · · · · · · · · · · ·</u>	<u> </u>							

WBID#	937
Site#	7

	Data Sheet B-	Site Characterization (Con	tinued)	
O				
Surrounding Condition		□ MDC concentation land	a I □ Urban arasa	☐ Rural Residential
☐ City/County parks	☐ playgrounds ☐ State parks	☐ MDC conservation land☐ National Forests	s □ Urban areas □ Nature trails	
☐ Campgrounds☐ Boating accesses	☐ State parks☑ Fence		☐ Steep Slopes	☐ Stairs/walkways ☐ Other:
Comments:	<u> </u>	☐ No tresspass sign	☐ Steep Stopes	U Other.
none				
none				
Evidence of Human l	Use:			
□ Roads	☐ Foot path/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock watering
comments/other:				
none				
Substrate:				
% Cobble	% Gravel	% Sand % Silt	t % Mud/0	Clay % Bedrock
% Copple	30	40 % Sill	30	•
	30	40		
Aquatic Vegatation:				
7.4				
none				
Water Characteristic	s:			
Odor:	☐ Sewage	☐ Musky ☐ Che		None ☐ Other:
Color:	☑ Clear	☑Green ☐ Gra	y 🗆 🗆 I	Milky ☐ Other:
		·		
Bottom Deposit: Surface Deposit:	☐ Sludge ☐ Oil	☐ Solids ☐ Fine ☐ Scum ☐ Foa		None ☐ Other: None ☐ Other:

WBID # 937 Site # 7

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Mor	phology:	Record isolated pools	or other features	identified during	the survey that may	support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (III)				
Comments: (Please re	cord any additional comments	here.)			
	,	,			
none					
Please verify that yo complete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.25.07	
Organization:	SES, Inc.		_ Position:	field team leader	

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	ygen		
	Waterb	ody ID:	937		·	Site #:	7									Date:	10.25.07	1		Time:	14:20	
	Estimat	ed Chan	nel Incisi	on:	1.0	(m) (hei	ght betw	een low b	ank widt	h and wa	ater)									13.8	(mg/L)	
						-		izontal Ac	•													
		UTM X	<u>:</u> :	0454936		Ì	UTM Y:		4292689		Ī	+/-	6.7 5.7	(meters)	•	Di	ssolved	Oxygen:			(% sat)	
																	Specifi	c Cond:			(µS/cm)	
			Width: ength of I				7	(meters)				Segment: n width)		150	(meters)	Wa	4 a T a			16	(0C)	
	(10 del	erinne Le	engui oi i	(each)					(2	ox avera	ge streat	n widin)				wa	ter remp	erature:		10	('C)	
	Fie	ld Staff:			Lariss	a Brown	and Gil	isa Gould						•								
										Tra	nsect C	ross-Se	ction									
		01	0	2	0	3		04	()5	0	16	(07	08	3	0	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance	Depth (m)	Distance	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		Distance (m)		Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance	Depth (m
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6		0.5		0.5		0.6	-	0.6		0.6		0.6	-	0.8		0.7	0.01	0.6	0.05	0.5	0.01
1	1.2												1.2		1.6				1.2	0.03	1.0	
4											1.2						1.4					0.03
•	1.8														2.4		2.1		1.8			0.05
4	2.4														3.2				2.4			
	3.0	0.20	2.5	0.20	2.5	0.25	3.0	0.15	3.0	0.20	3.0	0.30	3.0	0.00	4.0	0.10	3.5	0.01	3.0	0.10	2.5	0.03
(3.6	0.20	3.0	0.20	3.0	0.20	3.6	0.15	3.6	0.25	3.6	0.35	3.6	0.00	4.8	0.05	4.2	0.00	3.6	0.10	3.0	0.05
•	4.2	0.15	3.5	0.15	3.5	0.15	4.2	0.15	4.2	0.20	4.2	0.30	4.2	0.01	5.6	0.05	4.9	0.01	4.2	0.10	3.5	0.0
8	4.8	0.05	4.0	0.10	4.0	0.15	4.8	0.05	4.8	0.20	4.8	0.25	4.8	0.01	6.4	0.01	5.6	0.01	4.8	0.05	4.0	0.0
9	5.4	0.05	4.5	0.05	4.5	0.10	5.4	0.05	5.4	0.10	5.4	0.25	5.4	0.01	7.2	0.01	6.3	0.01	5.4	0.01	4.5	0.0
Right Bank	6.0	0.00	5.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	8.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00
eature Type																						
iffle, run, or poo	ol pe	ool	pc	ool	po	ol	p	ool	po	ool	pc	ool	pe	ool	po	ol	po	ol	po	ol	po	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
-------------------------------------	--



Site# 1 Photo ID# 71, Downstream T1



Site# 1 Photo ID# 73, Downstream T 11



Site# 1 Photo ID# 72, Upstream, T1



Site# 1 Photo ID# 74, Upstream, T 11



Site# 2 Photo ID# 75, Downstream T1



Site# 2 Photo ID# 77, Downstream T 11



Site# 2 Photo ID# 76, Upstream, T1



Site# 2 Photo ID# 78, Upstream, T 11



Site# 3 Photo ID# 79, Downstream T1



Site# 3 Photo ID# 81, Downstream T 11



Site# 3 Photo ID# 80, Upstream, T1



Site# 3 Photo ID# 82, Upstream, T 11



Site# 4 Photo ID# 83, Downstream T1



Site# 4 Photo ID# 85, Downstream T 11



Site# 4 Photo ID# 84, Upstream, T1



Site# 4 Photo ID# 86, Upstream, T 11



Site# 5 Photo ID# 87, Downstream T1



Site# 5 Photo ID# 89, Downstream T 11



Site# 5 Photo ID# 88, Upstream, T1



Site# 5 Photo ID# 90, Upstream, T 11



Site# 6 Photo ID# 91, Downstream T1



Site# 6 Photo ID# 93, Downstream T 11



Site# 6 Photo ID# 92, Upstream, T1



Site# 6 Photo ID# 94, Upstream, T 11



Site# 7 Photo ID# 95, Downstream T1



Site# 7 Photo ID# 97, Downstream T 11



Site# 7 Photo ID# 96, Upstream, T1



Site# 7 Photo ID# 98, Upstream, T 11

Data Sheet D – Recreational Use Interview (must be completed for each interview)

I. <u>Introduction</u>
Stream Name and WBID: Walnut Creek 937
Date & Time (include AM or PM): 3/6/08 9:45 a.m.
Interviewed: In person By phone By mail (NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)
Interviewee selected because (e.g., house next to stream; standing by stream, etc.) Mr. Christopher sent in comments saying he wades in above his waist in Walnut & Post Oak Creeks. Phoned him to follow-up.
Interviewer introduction to Interviewee: "My name is, I work for(name of your employer) and I am collecting information on how people use(name of the stream)"
ASK: 1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.) Yes No If yes, list contact information for the interviewee below:
Legal name: Warren T. Christopher Current mailing address: 210 Grover St. Warrens burg. MO
Daytime phone number: ((660) 429 - 1143 E-mail address (optional):
2.a.) Do you live in this area? Yes No If yes, how many years? 47
2.b.) If you don't live in this area, are you still familiar with this stream? Yes No If yes, how many years? If no, thank the individual for taking the time to talk to you and conclude the interview.
3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) Yes No If yes, proceed to "II. Personal Use?". If no, proceed to Section V.
 II. Personal Use? 1.) Have you or your family personally used the stream for recreation since November 28, 1975? Yes \(\subseteq \) Yes \(\subseteq \) If yes, proceed to #3. If no, proceed to, and complete #2.
2.a.) If no, list reasons stream not used.
b.) From here proceed to "III. Witnessed Use?".
3.) How do you use the stream?

	NAME AND ADDRESS OF TAXABLE PARTY.	Contact Recreation	the last of the la] vvv	
Swimming	Tubing	Snorkeling/Skin Di	ving	Water Skiin	g
If Interviewee (or	family) used the stream	for WBCR since N	ov. 28, 1975,	ask:	
4.a.) When (e.g., y	ear(s)?; season?; only after	a rain?) and how ofter	n (times/year)?		
			4 4		
1.5	ly? Describe specific loc		e map (See m	p requirements	in the
protocory					
] p r	NAME AND ADDRESS OF THE OWNER, WHEN PERSON ADDRESS OF THE OWNER, WHEN PERSON AND ADDRESS OF THE OWNER, WHEN	Contact Recreatio	n (SCR)	1 1	
Fishing [Wading Boat		ing 🔀 Ot	ner: puntin	e for arrow
f Interviewee (or	family) used the stream	for SCR since Nov	. 28, 1975, asl	: & enjoy	ing natu
l.c.) When (e.g., y	ear(s)?; season?; only after	a rain?) and how often	(times/year)?	alltin	ces
1 1 2 2 2 2 2			/		
	ly? Describe specific loc	eation and mark on th	e map (See ma	p requirements	in the
orotocol).	ly? Describe specific loc				
orotocol).					
protocol).	leng stream,	segmenta.	4		
protocol).		segmenta.	4		
e.e.) Which of these	e times and places (if any	segmenta.	4		
de.e.) Which of these	e times and places (if any	segmenta.	4		
. Witnessed Us	e times and places (if any	y) did children wade	or play?		
witnessed Use.) Have you obse	e times and places (if any	y) did children wade	or play?		
witnessed Us .) Have you obse Yes No If yes, proc	e times and places (if any	eam for recreation sin	or play?		
witnessed Us .) Have you obse Yes No If yes, proc If no, proc	e times and places (if any see? rved others using this street to #2.	eam for recreation single?".	or play?		
witnessed Us .) Have you obse Yes No If yes, proc If no, proc	e times and places (if any eee? rved others using this street to #2. eed to, "IV. Anecdotal Use	eam for recreation single?".	or play?		
. Witnessed Us .) Have you obse Yes No If yes, proc	e times and places (if any eee? rved others using this streed to #2. eed to, "IV. Anecdotal Ususes have you witnessed?	eam for recreation single?".	or play?		
	e times and places (if any ee? rved others using this streed to #2. eed to, "IV. Anecdotal Ususes have you witnessed? Whole Body	eam for recreation single?".	or play?		
.e.) Which of thes . Witnessed Us .) Have you obse Yes No If yes, proc If no, proc .) What kinds of	e times and places (if any ee? rved others using this streed to #2. eed to, "IV. Anecdotal Ususes have you witnessed? Whole Body	eam for recreation single?". Contact Recreation Snorkeling/Skin Div	or play?a (WBCR) ving	975? Water Skiing	

	<u> </u>
	THAT SEE AND TO BE A SECURED AND THE SECURED AS A SECURED
	Secondary Contact Recreation (SCR)
Fishing	Wading Boating Trapping Other:
	vee witnessed SCR use since Nov. 28, 1975, ask the following questions:
2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)?
	<u> 1917 NG NOO MANANA SAA TIRANG MANANANA AMBANANA IN SAA AMBANANA </u>
2.d.) Where,	exactly? Describe specific location and mark on the map (See map requirements in the
protocol)	
	Control of the contro
2.e.) Which	of these times and places (if any) did you specifically witness children wading or playing?
	The second secon
IV. Anecdo	
	heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or dor
yourself, but	just heard about it? Ves No s, proceed to #2.
yourself, but If ye	just heard about it? Yes No
yourself, but If ye If no	just heard about it? Yes No s, proceed to #2.
yourself, but If ye If no	just heard about it? Yes Nos, proceed to #2. thank the individual for taking the time to talk to you and conclude the interview.
yourself, but If ye If no	just heard about it? Yes Nos, proceed to #2. thank the individual for taking the time to talk to you and conclude the interview.
yourself, but If ye If no 2.) What kin	just heard about it? Yes Nos, proceed to #2. thank the individual for taking the time to talk to you and conclude the interview. d of uses have you heard about? Whole Body Contact Recreation (WBCR)
yourself, but If ye If no	just heard about it? Yes Nos, proceed to #2. thank the individual for taking the time to talk to you and conclude the interview. d of uses have you heard about? Whole Body Contact Recreation (WBCR)
yourself, but If ye If no 2.) What kin	just heard about it? Yes Noss, proceed to #2. It thank the individual for taking the time to talk to you and conclude the interview. It does not be a subject to the individual for taking the time to talk to you and conclude the interview. It does not be a subject to talk to you and conclude the interview. Whole Body Contact Recreation (WBCR) In Tubing Snorkeling/Skin Diving Water Skiing
yourself, but If ye If no 2.) What kin Swimmi If Interview	Just heard about it? Yes No s, proceed to #2. thank the individual for taking the time to talk to you and conclude the interview. d of uses have you heard about? Whole Body Contact Recreation (WBCR) ng Tubing Snorkeling/Skin Diving Water Skiing ee heard of WBCR use since Nov. 28, 1975, ask the following questions:
yourself, but If ye If no 2.) What kin Swimmi If Interview	just heard about it? Yes Noss, proceed to #2. It thank the individual for taking the time to talk to you and conclude the interview. It does not be a subject to the individual for taking the time to talk to you and conclude the interview. It does not be a subject to talk to you and conclude the interview. Whole Body Contact Recreation (WBCR) In Tubing Snorkeling/Skin Diving Water Skiing

WBID#	.937
	~
Site #	

Name of Person Interviewed_

d Christopher
Date of Interview 3/6/08

Secondary Contact Recreation (SCR)
☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: Hunting
If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:
2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)?
2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol)
2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing?
V. Others to Contact? Can you recommend someone else we could contact that knows the stream? Yes No If yes, that person's contact info (name, address, phone, directions?)
VI. Additional Comments From the Interviewee: Does not believe stream is used for seven many.
From the Interviewer:
VII. Information on Interviewer Has interviewer been trained by Missouri DNR to conduct UAA Interviews? ☐ Yes ☑ No
If yes, how? (check all that apply):
☐ Pre-Assessment Meeting ☐ Workshop ☐ On-line training seminar ☐ Other. If "Other," list:
Interviewer's Signature: Onne Perry
Interviewer's Name, Printed: Anne Peery
Employer (where applicable): Dept. of Natural Resources
Interviewer's Phone No.: 573-526-1426 E-mail: anne. peery @dnr. mo, gov

Data Sheet D - Recreational Use Interview

(must be completed for each interview)

I. <u>Introduction</u>
Stream Name and WBID: Walnut Creek # 937
Date & Time (include AM or PM): $3/4/8$ 9: 45 a. m
Interviewed: In person By phone By mail (NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)
Interviewee selected because (e.g., house next to stream; standing by stream, etc.) Mr. Brenner Commented in 2005 that this creek was used for recreational purposes, including swimming.
Interviewer introduction to Interviewee: "My name is, I work for(name of your employer), and I am collecting information on how people use(name of the stream)"
ASK: 1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.) Yes No If yes, list contact information for the interviewee below:
Legal name: William Brenner, Presiding Commissioner (County Current mailing address: Johnson County Court house, 300/Holden Warren 5 burg, mo 64093 Daytime phone number: (660) 747-6161 E-mail address (optional):
2.a.) Do you live in this area? Yes No If yes, how many years? 73
2.b.) If you don't live in this area, are you still familiar with this stream? Yes No If yes, how many years? If no, thank the individual for taking the time to talk to you and conclude the interview.
3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) Yes No <u>If yes</u> , proceed to "II. Personal Use?". <u>If no</u> , proceed to Section V.
 II. Personal Use? 1.) Have you or your family personally used the stream for recreation since November 28, 1975? Yes No If yes, proceed to #3. If no, proceed to, and complete #2.
2.a.) If no, list reasons stream not used. See comments og 4
b.) From here proceed to "III. Witnessed Use?".
3.) How do you use the stream?

Data Sheet D Revised: December 19, 2007

1	Whole Body Contact Recreation (WBCR)	
Swimming		
If Interviewee	(or family) used the stream for WBCR since Nov. 28, 1975, ask:	
4.a.) When (e.g	g., year(s)?; season?; only after a rain?) and how often (times/year)?	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		_
1 h) Where a	xactly? Describe specific location and mark on the map (See map requirements in the	n g des
	kacity: Describe specific focation and mark on the map (see map requirements in the	0.000 016
		. 10
	Secondary Contact Recreation (SCR)	
Fishing	Wading Boating Trapping Other:	
If Interviewee	(or family) used the stream for SCR since Nov. 28, 1975, ask:	
4.c.) When (e.g	g., year(s)?; season?; only after a rain?) and how often (times/year)?	
		_
		_
		_
4.d.) Where, ex		_
4.d.) Where, ex	xactly? Describe specific location and mark on the map (See map requirements in the	_
4.d.) Where, ex	xactly? Describe specific location and mark on the map (See map requirements in the	_
4.d.) Where, exprotocol)	xactly? Describe specific location and mark on the map (See map requirements in the	_
4.d.) Where, ex	xactly? Describe specific location and mark on the map (See map requirements in the	_
4.d.) Where, exprotocol)	xactly? Describe specific location and mark on the map (See map requirements in the these times and places (if any) did children wade or play?	_
4.d.) Where, exprotocol)4.e.) Which of the second s	Exactly? Describe specific location and mark on the map (See map requirements in the sthese times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975?	_
4.d.) Where, exprotocol) 4.e.) Which of the control of the	Exactly? Describe specific location and mark on the map (See map requirements in the sthese times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975?	_
4.d.) Where, exprotocol)4.e.) Which of the second state of	Exactly? Describe specific location and mark on the map (See map requirements in the schese times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975? No	_
4.d.) Where, exprotocol)4.e.) Which of the second state of	Exactly? Describe specific location and mark on the map (See map requirements in the stress and places (if any) did children wade or play? Use? Use? Use hoserved others using this stream for recreation since Nov. 28, 1975? No proceed to #2.	_
4.d.) Where, exprotocol)4.e.) Which of the second state of	Leave times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975? No proceed to #2. roceed to, "IV. Anecdotal Use?". of uses have you witnessed?	_
4.d.) Where, exprotocol). 4.e.) Which of the second secon	Linese times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975? No proceed to #2. roceed to #2. roceed to, "IV. Anecdotal Use?". of uses have you witnessed? Whole Body Contact Recreation (WBCR)	_
4.d.) Where, exprotocol)	Linese times and places (if any) did children wade or play? Linese times and places (if any) did children wade or play? Linese times and places (if any) did children wade or play? Linese? Sourced others using this stream for recreation since Nov. 28, 1975? No proceed to #2. Proceed to #2. Proceed to, "IV. Anecdotal Use?". Of uses have you witnessed? Whole Body Contact Recreation (WBCR) Tubing Snorkeling/Skin Diving Water Skiing	_
4.d.) Where, exprotocol). 4.e.) Which of the second secon	Linese times and places (if any) did children wade or play? Use? bserved others using this stream for recreation since Nov. 28, 1975? No proceed to #2. roceed to #2. roceed to, "IV. Anecdotal Use?". of uses have you witnessed? Whole Body Contact Recreation (WBCR)	_

#	_			1142	me of Person Interview	
						Date of Interview
2.b.) Wh	ere, exactly? D	escribe specif	fic location and r	nark on the map	(See map require	ements in the
protocol)						
		Secon	idary Contact l	Recreation (SC	R)	
Fish	ng 🔲 Wa	ding	Boating [Trapping	Other:	
If Intor	viewee witness	and SCD use	since Nov 28	1975, ask the	following gues	tions:
2.c.) Wh	en (e.g., year(s)?	; season?; only	after a rain?) and	how often (times	/year)?	
				nark on the map		
protocol)						
2) WI	. 1 . 0.1		40 > 111			
2.e.) Wh	ich of these time	es and places	(if any) did you	specifically witne	ess children wad	ing or playing
2.e.) Wh	ich of these time	es and places	(if any) did you	specifically witne	ess children wad	ing or playing
		es and places	(if any) did you s	specifically witne	ess children wad	ing or playing
IV. Ane	cdotal Use?					>
IV. Ane	cdotal Use?	t anvone usin	othis stream since	ce Nov. 28, 1975		>
IV. Ane	cdotal Use?	t anvone usin	othis stream since	ce Nov. 28, 1975		>
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard at	t anyone usin bout it?	g-this stream sind Yes No	ee Nov. 28, 1975	for recreation –	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard at	t anyone usin bout it?	g-this stream sind Yes No	ce Nov. 28, 1975	for recreation –	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard at	t anyone usin bout it? (1) #2. ndividual for t	g this stream sind Yes TNo (SCR-48 taking the time to	ee Nov. 28, 1975	for recreation –	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for t	g this stream sind Yes TNo (SCR-48 taking the time to	ee Nov. 28, 1975	for recreation –	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for t	g this stream sind Yes TNo (SCR-48 taking the time to	ee Nov. 28, 1975	for recreation –	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for to we you heard a	g this stream sind Yes TNo SCR-Ye taking the time to about?	ce Nov. 28, 1975 talk to you and	for recreation – conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard at yes, proceed to no, thank the inkind of uses have	t anyone usin pout it? #2. ndividual for the yee you heard a whole I	g-this stream sind Yes No SCR-Waking the time to about?	te Nov. 28, 1975 talk to you and	for recreation – conclude the inte	not seen or do
IV. Ane 1.) Have yourself,	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for t	g this stream sind Yes TNo (SCR-48 taking the time to	ee Nov. 28, 1975	for recreation –	not seen or
IV. Ane 1.) Have yourself, I	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for to we you heard a	g this stream sind Yes TNo SCR-Ye taking the time to about?	ce Nov. 28, 1975 talk to you and	for recreation – conclude the inte	not seen or de
IV. Ane 1.) Have yourself, I. 2.) What	cdotal Use? you heard abou but just heard al yes, proceed to no, thank the in	t anyone usin bout it? (1) #2. ndividual for to we you heard a	g-this stream sind Yes No SCR-Waking the time to about?	ce Nov. 28, 1975 talk to you and	for recreation – conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard at yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Heard Tubing	g this stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling	ecreation (WB)	for recreation – conclude the interest.	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard at yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Heard Tubing	g this stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling	te Nov. 28, 1975 talk to you and	for recreation – conclude the interest.	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard all yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Hard Tubing WBCR use significant to the two the two the two the two the two the two	gethis stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling Since Nov. 28, 19	ecreation (WB)	for recreation — conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard all yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Hard Tubing WBCR use significant to the two the two the two the two the two the two	gethis stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling Since Nov. 28, 19	ecreation (WB) /Skin Diving	for recreation — conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard all yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Hard Tubing WBCR use significant to the two the two the two the two the two the two	gethis stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling Since Nov. 28, 19	ecreation (WB) /Skin Diving	for recreation — conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard all yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Hard Tubing WBCR use significant to the two the two the two the two the two the two	gethis stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling Since Nov. 28, 19	ecreation (WB) /Skin Diving	for recreation — conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I. 2.) What	you heard about but just heard all yes, proceed to no, thank the inkind of uses have	t anyone using pout it? #2. Individual for the twe you heard a whole Hard Tubing WBCR use significant to the two the two the two the two the two the two	gethis stream sind Yes No SCR-You saking the time to about? Body Contact R Snorkeling Since Nov. 28, 19	ecreation (WB) /Skin Diving	for recreation — conclude the inte	not seen or do
IV. Ane 1.) Have yourself, I 2.) What Swin If Intervi 2.a.) Wh	you heard about but just heard all yes, proceed to no, thank the inkind of uses have mining ewee heard of the endid these uses	t anyone using pout it? #2. Individual for the service you heard a whole E Tubing WBCR use signs take place (experience)	g-this stream sind Yes No SCR-Walking the time to about? Body Contact R Snorkeling ince Nov. 28, 19 E.g., year(s)?; seaso	ecreation (WB) /Skin Diving	for recreation — conclude the inte	not seen or do

Secondary Contact Recreation (SCR) Fishing									Da	te of Interview_
Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions: 2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year) 2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). All Alma, ispecially in "wetlands" forward Blackwater River River and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? A. Others to Contact? Can you recommend someone else we could contact that knows the stream? Yes No fyes, that person's contact info (name, address, phone, directions?)				Seco	ondary Cont	act Recreation (SCR)			
2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.a. you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)	X Fishing		Wading		Boating			Other:	Hun	ling
2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.a. you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)	f Interview	ee hear	d of SCR u	ıse siı	nce Nov. 28.	1975, ask the foll	owing	auestion	s:)
2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). All Alma, especially in "wetlands" forward Blackwater River Twhich Swalnut Breek runs into]. 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.a. Others to Contact? Can you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)										/)(
C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.an you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)	z.c.) when	na tnes	e uses take	place	(e.g., year(s)?	; season?; only after	a rain?	and nov	w often (times/year):
C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.an you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)										
C.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? C.an you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)										
Blackwater River Twhich dwalnut Breek runs into . 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? 2.e. Others to Contact? 2.e. Others to Contact? 2.e. Others to Contact? 2.e. Others to Contact? 3.e. Others to Contact? 3.e. Others to Contact? 4.e. Others to Contact? 4.e. Others to Contact? 4.e. Others to Contact? 5.e. Others to Contact? 6.e. Others to Contact? 6.e. Others to Contact? 6.e. Others to Contact? 6.e. Others to Contact? 8.e. Others to Contact? 8.e. Others to Contact? 8.e. Others to Contact? 8.e. Others to Contact? 9.e. Other	2.d.) Where	exactly	y? Describe	e spec	eific location	and mark on the n	nap (See	e map re	quiremen	its in the
7. Others to Contact? Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No f yes, that person's contact info (name, address, phone, directions?)	protocol)	0 /	0 00		1	00 "	+6	7 0	25 /	,
7. Others to Contact? Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No f yes, that person's contact info (name, address, phone, directions?)	Black	al	e alon	8)	especia	elly in	Brank	and	1 10	- Vara
7. Others to Contact? Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No f yes, that person's contact info (name, address, phone, directions?)	Dalk			XU1			NE DOOL	K-11/11		
7. Others to Contact? Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No f yes, that person's contact info (name, address, phone, directions?)		war	ec 190		Librar	wowaening.	16 000	1000	US NW	
Can you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)		war	or real		1_10420		,		OS XXX	
Can you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)	2.e.) Which	of these	e times and	place	es (if any) did	you hear specifica	ally of c	children	wading o	or playing?
Can you recommend someone else we could contact that knows the stream? Yes No f yes, that person's contact info (name, address, phone, directions?)	2.e.) Which	of these	e times and	place	es (if any) did	you hear specifica	ally of c	children	wading o	or playing?
f yes, that person's contact info (name, address, phone, directions?)				place	s (if any) did	you hear specifica	ally of c	children	wading o	or playing?
	V. Others	to Con	tact?	1210			k si i			1, 0
f no, thank the individual for taking the time to talk to you and conclude the interview.	V. Others	to Con	tact?	else w	ve could conta	act that knows the	stream			1, 0
f no, thank the individual for taking the time to talk to you and conclude the interview.	V. Others	to Con	tact?	else w	ve could conta	act that knows the	stream			1, 0
f no, thank the individual for taking the time to talk to you and conclude the interview.	V. Others Can you reco	to Con	tact?	else w	ve could conta	act that knows the	stream			1, 0
	V. Others Can you reco	ommeno erson's	tact? I someone e	else w	ve could containe, address, p	act that knows the hone, directions?)	stream	? 🗆 Ye	es 🗌 N	1, 0
/I. Additional Comments	V. Others Can you reco	ommeno erson's	tact? I someone e	else w	ve could containe, address, p	act that knows the hone, directions?)	stream	? 🗆 Ye	es 🗌 N	1, 0
From the Interviewee: Lo does not know of any sevenimeno	V. Others Can you reco	to Conommencerson's	tact? I someone contact info	else w	ve could containe, address, p	act that knows the hone, directions?)	stream	? 🗆 Ye	es 🗌 N	1, 0
because it viens shall an	V. Others Can you reco	to Conommencerson's	tact? I someone of contact info	else w	ve could containe, address, p	act that knows the hone, directions?)	stream'	? Ye	es N	lo .
The Attention of the state of t	V. Others Can you recome the second of the s	to Conformencerson's he individual Co	tact? I someone e contact info	else wo (name	ve could containe, address, p	act that knows the hone, directions?)	stream'	Ye Ye	es N	lo .
	V. Others Can you recommend the second secon	to Consumence of the individual consumers of the individua	tact? I someone e contact info	else wo (name	the time to ta	t knows the thone, directions?) The sum of	stream's	Ye Ye	es N	lo .
shallow & people Brown in other nearly, better or	V. Others Can you recommend that person the lint shading the second that the s	to Consumence of the individual consumers of the individua	tact? I someone e contact info	else wo (name	the time to ta	t knows the thone, directions?) The sum of	stream's	Ye Ye	es N	lo .

VII. Information on Interviewer Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

Yes No

If yes, how? (check all that apply):

Pre-Assessment Meeting ■ Workshop

Other. If "Other," list: Interviewer's Signature:

Interviewer's Name, Printed:

Employer (where applicable):

On-line training seminar

1426 E-mail: Onne. peery @dnr. mo.gov

Page 4 of 4